



SEQUENCE LISTING

<120> Kopin, Alan S.
Beinborn, Martin

<120> Constitutively Active, Hypersensitive,
and Nonfunctional Receptors as Novel Therapeutic Agents

<130> 00398/510002

<140> US 10/039,645
<141> 2001-10-25

<150> US 60/243,550
<151> 2000-10-26

<160> 87

<170> FastSEQ for Windows Version 4.0

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Gly Leu Gly Gly Asn Asp Ser Leu Cys Pro Gln Thr Gly Ser Pro Ser
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Met Val Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val Cys Val
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Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val Arg Tyr
85 90 95
Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu Ala Leu
100 105 110
Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val Asn Tyr
115 120 125
Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile Val Ile
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Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu Cys Thr
145 150 155 160
Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys Ala Leu
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Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Val Asn Val Cys Asn Trp
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Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala Thr Thr
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Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser His Pro
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Thr Trp Tyr Trp Glu Asn Leu Leu Lys Ile Cys Val Phe Ile Phe Ala
225 230 235 240

Phe Ile Met Pro Ile Leu Ile Thr Val Cys Tyr Gly Leu Met Ile
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Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu Lys Asp
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Arg Asn Leu Arg Arg Ile Thr Arg Met Val Leu Val Val Ala Val
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Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile Lys Ala
290 295 300
Leu Ile Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp His Phe
305 310 315 320
Cys Ile Ala Leu Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val Leu Tyr
325 330 335
Ala Phe Leu Asp Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe Cys Ile
340 345 350
Pro Thr Ser Ser Thr Ile Glu Gln Gln Asn Ser Thr Arg Val Arg Gln
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His Ile Ser Pro Ala Asp Pro Val Glu Ile Thr Ala Val Tyr Ser Val
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Val Phe Val Val Gly Leu Val Gly Asn Ser Leu Val Met Phe Val Ile
65 70 75 80
Ile Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn
85 90 95
Leu Ala Leu Ala Asp Ala Leu Val Thr Thr Met Pro Phe Gln Ser
100 105 110
Thr Val Tyr Leu Met Asn Ser Trp Pro Phe Gly Asp Val Leu Cys Lys
115 120 125
Ile Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr
130 135 140
Leu Thr Met Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val
145 150 155 160
Lys Ala Leu Asp Phe Arg Thr Pro Leu Lys Ala Lys Ile Ile Asn Ile
165 170 175
Cys Ile Trp Leu Leu Ser Ser Val Gly Ile Ser Ala Ile Val Leu
180 185 190
Gly Gly Thr Lys Val Arg Glu Asp Val Asp Val Ile Glu Cys Ser Leu
195 200 205
Gln Phe Pro Asp Asp Asp Tyr Ser Trp Trp Asp Leu Phe Met Lys Ile
210 215 220
Cys Val Phe Ile Phe Ala Phe Val Ile Pro Val Leu Ile Ile Ile Val
225 230 235 240
Cys Tyr Thr Leu Met Ile Leu Arg Leu Lys Ser Val Arg Leu Leu Ser
245 250 255

Gly	Ser	Arg	Glu	Lys	Asp	Arg	Asn	Leu	Arg	Arg	Ile	Thr	Arg	Leu	Val
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Leu	Val	Val	Val	Ala	Val	Phe	Val	Val	Cys	Trp	Thr	Pro	Ile	His	Ile
								275	280				285		
Phe	Ile	Leu	Val	Glu	Ala	Leu	Gly	Ser	Thr	Ser	His	Ser	Thr	Ala	Ala
								290	295			300			
Leu	Ser	Ser	Tyr	Tyr	Phe	Cys	Ile	Ala	Leu	Gly	Tyr	Thr	Asn	Ser	Ser
								305	310		315		320		
Leu	Asn	Pro	Ile	Leu	Tyr	Ala	Phe	Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys
								325	330			335			
Phe	Arg	Asp	Phe	Cys	Phe	Pro	Leu	Lys	Met	Arg	Met	Glu	Arg	Gln	Ser
								340	345			350			
Thr	Ser	Arg	Val	Arg	Asn	Thr	Val	Gln	Asp	Pro	Ala	Tyr	Leu	Arg	Asp
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Trp	Ala	Glu	Ser	Asp	Ser	Asn	Gly	Ser	Val	Gly	Ser	Glu	Asp	Gln	Gln
					35				40				45		
Leu	Glu	Pro	Ala	His	Ile	Ser	Pro	Ala	Ile	Pro	Val	Ile	Ile	Thr	Ala
					50				55			60			
Val	Tyr	Ser	Val	Val	Phe	Val	Val	Gly	Leu	Val	Gly	Asn	Ser	Leu	Val
					65				70			75		80	
Met	Phe	Val	Ile	Ile	Arg	Tyr	Thr	Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile
					85				90				95		
Tyr	Ile	Phe	Asn	Leu	Ala	Leu	Ala	Asp	Ala	Leu	Val	Thr	Thr	Thr	Met
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Pro	Phe	Gln	Ser	Ala	Val	Tyr	Leu	Met	Asn	Ser	Trp	Pro	Phe	Gly	Asp
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Val	Leu	Cys	Lys	Ile	Val	Ile	Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr
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Ser	Ile	Phe	Thr	Leu	Thr	Met	Met	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Val
					145				150			155		160	
Cys	His	Pro	Val	Lys	Ala	Leu	Asp	Phe	Arg	Thr	Pro	Leu	Lys	Ala	Lys
					165				170				175		
Ile	Ile	Asn	Ile	Cys	Ile	Trp	Ile	Leu	Ala	Ser	Ser	Val	Gly	Ile	Ser
					180				185			190			
Ala	Ile	Val	Leu	Gly	Gly	Thr	Lys	Val	Arg	Glu	Asp	Val	Asp	Val	Ile
					195				200			205			
Glu	Cys	Ser	Leu	Gln	Phe	Pro	Asp	Asp	Glu	Tyr	Ser	Trp	Trp	Asp	Leu
					210				215			220			
Phe	Met	Lys	Ile	Cys	Val	Phe	Val	Phe	Ala	Phe	Val	Ile	Pro	Val	Leu
					225				230			235		240	
Ile	Ile	Ile	Val	Cys	Tyr	Thr	Leu	Met	Ile	Leu	Arg	Leu	Lys	Ser	Val
					245				250				255		
Arg	Leu	Leu	Ser	Gly	Ser	Arg	Glu	Lys	Asp	Arg	Asn	Leu	Arg	Arg	Ile
					260				265			270			

Thr Lys Ile Val Leu Val Val Ala Val Phe Ile Ile Cys Trp Thr
 275 280 285
 Pro Ile His Ile Phe Ile Leu Val Glu Ala Leu Gly Ser Thr Ser His
 290 295 300
 Ser Thr Ala Val Leu Ser Ser Tyr Tyr Phe Cys Ile Ala Leu Gly Tyr
 305 310 315 320
 Thr Asn Ser Ser Leu Asn Pro Val Leu Tyr Ala Phe Leu Asp Glu Asn
 325 330 335
 Phe Lys Arg Cys Phe Arg Asp Phe Cys Phe Pro Ile Lys Met Arg Met
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 355 360 365
 Ser Met Arg Asp Val Gly Gly Met Asn Lys Pro Val
 370 375 380

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 Asn Leu Ser His Leu Asp Gly Asn Leu Ser Asp Pro Cys Gly Pro Asn
 35 40 45
 Arg Thr Asp Leu Gly Gly Arg Asp Ser Leu Cys Pro Pro Thr Gly Ser
 50 55 60
 Pro Ser Met Ile Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val
 65 70 75 80
 Cys Val Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val
 85 90 95
 Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu
 100 105 110
 Ala Leu Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val
 115 120 125
 Asn Tyr Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile
 130 135 140
 Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu
 145 150 155 160
 Cys Thr Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys
 165 170 175
 Ala Leu Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Ile Asn Val Cys
 180 185 190
 Asn Trp Ile Leu Ser Ser Ala Ile Gly Ile Pro Val Met Phe Met Ala
 195 200 205
 Thr Thr Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser
 210 215 220
 His Pro Thr Trp Tyr Trp Glu Asn Leu Asp Lys Ile Cys Val Phe Ile
 225 230 235 240
 Phe Ala Phe Ile Met Pro Val Leu Ile Ile Thr Val Cys Tyr Gly Leu
 245 250 255
 Met Ile Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu
 260 265 270
 Lys Asp Arg Asn Leu Arg Arg Ile Thr Arg Met Val Leu Val Val Val
 275 280 285

Ala	Val	Phe	Ile	Val	Cys	Trp	Thr	Pro	Ile	His	Ile	Tyr	Val	Ile	Ile
290		295										300			
Lys	Ala	Leu	Val	Thr	Ile	Pro	Glu	Thr	Thr	Phe	Gln	Thr	Val	Ser	Trp
305		310								315					320
His	Phe	Cys	Ile	Ala	Leu	Gly	Tyr	Thr	Asn	Ser	Cys	Leu	Asn	Pro	Val
	325		330												335
Leu	Tyr	Ala	Phe	Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Glu	Phe
	340		345												350
Cys	Ile	Pro	Thr	Ser	Ser	Asn	Ile	Glu	Gln	Gln	Asn	Ser	Thr	Arg	Ile
	355		360												365
Arg	Gln	Asn	Thr	Arg	Asp	His	Pro	Ser	Thr	Ala	Asn	Thr	Val	Asp	Arg
	370		375												380
Thr	Asn	His	Gln	Leu	Glu	Asn	Leu	Glu	Ala	Glu	Thr	Ala	Pro	Leu	Pro
	385		390												400

<210> 79
 <211> 398
 <212> PRT
 <213> Homo sapiens

<400>	79														
Met	Asp	Ser	Ser	Thr	Gly	Pro	Gly	Asn	Thr	Ser	Asp	Cys	Ser	Asp	Pro
1		5							10						15
Leu	Ala	Gln	Ala	Ser	Cys	Ser	Pro	Ala	Pro	Gly	Ser	Trp	Leu	Asn	Leu
		20							25						30
Ser	His	Val	Asp	Gly	Asn	Gln	Ser	Asp	Pro	Cys	Gly	Leu	Asn	Arg	Thr
		35						40				45			
Gly	Leu	Gly	Gly	Asn	Asp	Ser	Leu	Cys	Pro	Gln	Thr	Gly	Ser	Pro	Ser
		50						55				60			
Met	Val	Thr	Ala	Ile	Thr	Ile	Met	Ala	Leu	Tyr	Ser	Ile	Val	Cys	Val
		65					70			75					80
Val	Gly	Leu	Phe	Gly	Asn	Phe	Leu	Val	Met	Tyr	Val	Ile	Val	Arg	Tyr
			85					90							95
Thr	Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu	Ala	Leu
			100					105							110
Ala	Asp	Ala	Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe	Gln	Ser	Val	Asn	Tyr
			115					120							125
Leu	Met	Gly	Thr	Trp	Pro	Phe	Gly	Thr	Ile	Leu	Cys	Lys	Ile	Val	Ile
		130				135					140				
Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile	Phe	Thr	Leu	Cys	Thr
		145				150				155					160
Met	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Val	Cys	His	Pro	Val	Lys	Ala	Leu
			165					170							175
Asp	Phe	Arg	Thr	Pro	Arg	Asn	Ala	Lys	Ile	Val	Asn	Val	Cys	Asn	Trp
			180					185							190
Ile	Leu	Ser	Ser	Ala	Ile	Gly	Ile	Pro	Val	Met	Phe	Met	Ala	Thr	Thr
			195					200				205			
Lys	Tyr	Arg	Gln	Gly	Ser	Ile	Asp	Cys	Thr	Leu	Thr	Phe	Ser	His	Pro
		210				215				220					
Thr	Trp	Tyr	Trp	Glu	Asn	Leu	Leu	Lys	Ile	Cys	Val	Phe	Ile	Phe	Ala
		225				230				235					240
Phe	Ile	Met	Pro	Val	Leu	Ile	Ile	Thr	Val	Cys	Tyr	Gly	Leu	Met	Ile
			245					250							255
Leu	Arg	Leu	Lys	Ser	Val	Arg	Met	Leu	Ser	Gly	Ser	Lys	Glu	Lys	Asp
			260					265							270
Arg	Asn	Leu	Arg	Arg	Ile	Thr	Arg	Met	Val	Leu	Val	Val	Val	Ala	Val
			275					280							285

Phe	Ile	Val	Cys	Trp	Thr	Pro	Ile	His	Ile	Tyr	Val	Ile	Ile	Lys	Ala
290			295								300				
Leu	Ile	Thr	Ile	Pro	Glu	Thr	Thr	Phe	Gln	Thr	Val	Ser	Trp	His	Phe
305				310					315					320	
Cys	Ile	Ala	Leu	Gly	Tyr	Thr	Asn	Ser	Cys	Leu	Asn	Pro	Val	Leu	Tyr
				325				330					335		
Ala	Phe	Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Glu	Phe	Cys	Ile
			340			345							350		
Pro	Thr	Ser	Ser	Thr	Ile	Glu	Gln	Gln	Asn	Ser	Thr	Arg	Val	Arg	Gln
				355		360					365				
Asn	Thr	Arg	Glu	His	Pro	Ser	Thr	Ala	Asn	Thr	Val	Asp	Arg	Thr	Asn
				370		375					380				
His	Gln	Leu	Glu	Asn	Leu	Glu	Ala	Glu	Thr	Ala	Pro	Leu	Pro		
				385		390					395				

<210> 80
<211> 372
<212> PRT
<213> Homo sapiens

<400> 80															
Met	Glu	Pro	Ala	Pro	Ser	Ala	Gly	Ala	Glu	Leu	Gln	Pro	Pro	Leu	Phe
1				5					10					15	
Ala	Asn	Ala	Ser	Asp	Ala	Tyr	Pro	Ser	Ala	Cys	Pro	Ser	Ala	Gly	Ala
				20				25					30		
Asn	Ala	Ser	Gly	Pro	Pro	Gly	Ala	Arg	Ser	Ala	Ser	Ser	Leu	Ala	Leu
				35			40					45			
Ala	Ile	Ala	Ile	Thr	Ala	Leu	Tyr	Ser	Ala	Val	Cys	Ala	Val	Gly	Leu
				50			55				60				
Leu	Gly	Asn	Val	Leu	Val	Met	Phe	Gly	Ile	Val	Arg	Tyr	Thr	Lys	Met
				65		70		75				80			
Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu	Ala	Leu	Asp	Ala	
				85			90					95			
Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe	Gln	Ser	Ala	Lys	Tyr	Leu	Met	Glu
				100			105					110			
Thr	Trp	Pro	Phe	Gly	Glu	Leu	Leu	Cys	Lys	Ala	Val	Ile	Ser	Ile	Asp
				115			120					125			
Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile	Phe	Thr	Leu	Thr	Met	Met	Ser	Val
				130			135				140				
Asp	Arg	Tyr	Ile	Ala	Val	Cys	His	Pro	Val	Lys	Ala	Leu	Asp	Phe	Arg
				145			150			155			160		
Thr	Pro	Ala	Lys	Ala	Lys	Ile	Ile	Asn	Ile	Cys	Ile	Trp	Val	Leu	Ala
				165			170					175			
Ser	Gly	Val	Gly	Val	Pro	Ile	Met	Val	Met	Ala	Val	Thr	Arg	Pro	Arg
				180			185				190				
Asp	Gly	Ala	Val	Val	Cys	Met	Leu	Gln	Phe	Pro	Ser	Pro	Ser	Trp	Tyr
				195			200				205				
Trp	Asp	Thr	Val	Thr	Lys	Ile	Cys	Val	Phe	Leu	Phe	Ala	Phe	Val	Val
				210			215			220					
Pro	Ile	Leu	Ile	Ile	Thr	Val	Cys	Tyr	Gly	Leu	Met	Leu	Leu	Arg	Leu
				225			230			235			240		
Arg	Ser	Val	Arg	Leu	Leu	Ser	Gly	Ser	Lys	Glu	Lys	Asp	Arg	Ser	Leu
				245			250					255			
Arg	Arg	Ile	Thr	Arg	Met	Val	Leu	Val	Val	Val	Gly	Ala	Phe	Val	Val
				260			265				270				
Cys	Trp	Ala	Pro	Ile	His	Ile	Phe	Val	Ile	Val	Trp	Thr	Leu	Val	Asp
				275			280				285				

Ile	Asp	Arg	Arg	Asp	Pro	Leu	Val	Val	Ala	Ala	Leu	His	Leu	Cys	Ile
290						295						300			
Ala	Leu	Gly	Tyr	Ala	Asn	Ser	Ser	Leu	Asn	Pro	Val	Leu	Tyr	Ala	Phe
305						310					315				320
Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Gln	Leu	Cys	Arg	Lys	Pro
					325				330				335		
Cys	Gly	Arg	Pro	Asp	Pro	Ser	Ser	Phe	Ser	Arg	Ala	Arg	Glu	Ala	Thr
					340				345				350		
Ala	Arg	Glu	Arg	Val	Thr	Ala	Cys	Thr	Pro	Ser	Asp	Gly	Pro	Gly	Gly
					355				360				365		
Gly	Ala	Ala	Ala												
					370										

<210> 81
<211> 359
<212> PRT
<213> Homo sapiens

<400>	81															
Met	Ala	Leu	Asn	Ser	Ser	Ala	Glu	Asp	Gly	Ile	Lys	Arg	Ile	Gln	Asp	
1						5				10				15		
Asp	Cys	Pro	Lys	Ala	Gly	Arg	His	Ser	Tyr	Ile	Phe	Val	Met	Ile	Pro	
						20				25				30		
Thr	Leu	Tyr	Ser	Ile	Ile	Phe	Val	Val	Gly	Ile	Phe	Gly	Asn	Ser	Leu	
						35				40				45		
Val	Val	Ile	Val	Ile	Tyr	Phe	Tyr	Met	Lys	Leu	Lys	Thr	Val	Ala	Ser	
						50				55				60		
Val	Phe	Leu	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Leu	Cys	Phe	Leu	Leu	Thr	
						65				70				75		80
Leu	Pro	Leu	Trp	Ala	Val	Tyr	Thr	Ala	Met	Glu	Tyr	Arg	Trp	Pro	Phe	
						85				90				95		
Gly	Asn	His	Leu	Cys	Lys	Ile	Ala	Ser	Ala	Ser	Val	Thr	Glu	Asn	Leu	
						100				105				110		
Tyr	Ala	Ser	Val	Phe	Leu	Leu	Thr	Cys	Leu	Ser	Ile	Asp	Arg	Tyr	Leu	
						115				120				125		
Ala	Ile	Val	His	Pro	Met	Lys	Ser	Arg	Leu	Arg	Arg	Thr	Met	Leu	Val	
						130				135				140		
Ala	Lys	Val	Thr	Cys	Ile	Ile	Trp	Leu	Met	Ala	Gly	Leu	Ala	Ser		
						145				150				155		160
Leu	Pro	Ala	Val	Ile	His	Arg	Asn	Val	Tyr	Phe	Ile	Glu	Asn	Thr	Asn	
						165				170				175		
Ile	Thr	Val	Cys	Ala	Phe	His	Tyr	Glu	Ser	Arg	Asn	Ser	Thr	Leu	Pro	
						180				185				190		
Ile	Gly	Leu	Gly	Leu	Thr	Lys	Asn	Ile	Leu	Gly	Phe	Leu	Phe	Pro	Phe	
						195				200				205		
Leu	Ile	Ile	Ile	Thr	Ser	Tyr	Thr	Leu	Ile	Trp	Lys	Ala	Leu	Lys	Lys	
						210				215				220		
Ala	Tyr	Glu	Ile	Gln	Lys	Asn	Lys	Pro	Arg	Asn	Asp	Asp	Ile	Phe	Arg	
						225				230				235		240
Ile	Ile	Met	Ala	Ile	Val	Leu	Phe	Phe	Phe	Phe	Ser	Trp	Val	Pro	His	
						245				250				255		
Gln	Ile	Phe	Thr	Phe	Leu	Asp	Val	Leu	Ile	Gln	Leu	Gly	Val	Ile	His	
						260				265				270		
Asp	Cys	Lys	Ile	Ser	Asp	Ile	Val	Asp	Thr	Ala	Met	Pro	Ile	Thr	Ile	
						275				280				285		
Cys	Ile	Ala	Tyr	Phe	Asn	Asn	Cys	Leu	Asn	Pro	Leu	Phe	Tyr	Gly	Phe	
						290				295				300		

Leu	Gly	Lys	Lys	Phe	Lys	Lys	Tyr	Phe	Leu	Gln	Leu	Leu	Lys	Tyr	Ile
305				310					315						320
Pro	Pro	Lys	Ala	Lys	Ser	His	Ser	Ser	Leu	Ser	Thr	Lys	Met	Ser	Thr
				325					330						335
Leu	Ser	Tyr	Arg	Pro	Ser	Asp	Asn	Met	Ser	Ser	Ser	Ala	Lys	Lys	Pro
				340				345							350
Ala	Ser	Cys	Phe	Glu	Val	Glu									
				355											

<210> 82
<211> 391
<212> PRT
<213> Homo sapiens

<400>	82														
Met	Phe	Ser	Pro	Trp	Lys	Ile	Ser	Met	Phe	Leu	Ser	Val	Arg	Glu	Asp
1				5				10							15
Ser	Val	Pro	Thr	Thr	Ala	Ser	Phe	Ser	Ala	Asp	Met	Leu	Asn	Val	Thr
				20				25							30
Leu	Gln	Gly	Pro	Thr	Leu	Asn	Gly	Thr	Phe	Ala	Gln	Ser	Lys	Cys	Pro
					35			40							45
Gln	Val	Glu	Trp	Leu	Gly	Trp	Leu	Asn	Thr	Ile	Gln	Pro	Pro	Phe	Leu
				50				55							60
Trp	Val	Ile	Phe	Val	Leu	Ala	Thr	Leu	Glu	Asn	Ile	Phe	Val	Leu	Ser
					65			70				75			80
Val	Phe	Cys	Leu	His	Lys	Ser	Ser	Cys	Thr	Val	Ala	Glu	Ile	Tyr	Leu
					85			90							95
Gly	Asn	Leu	Ala	Ala	Ala	Asp	Leu	Ile	Leu	Ala	Cys	Gly	Leu	Pro	Phe
					100			105							110
Trp	Ala	Ile	Thr	Ile	Ser	Asn	Asn	Phe	Asp	Trp	Leu	Phe	Gly	Glu	Thr
					115			120				125			
Leu	Cys	Arg	Val	Val	Asn	Ala	Ile	Ile	Ser	Met	Asn	Leu	Tyr	Ser	Ser
					130			135				140			
Ile	Cys	Phe	Leu	Met	Leu	Val	Ser	Ile	Asp	Arg	Tyr	Leu	Ala	Leu	Val
					145			150			155				160
Lys	Thr	Met	Ser	Met	Gly	Arg	Met	Arg	Gly	Val	Arg	Trp	Ala	Lys	Leu
					165			170				175			
Tyr	Ser	Leu	Val	Ile	Trp	Gly	Cys	Thr	Leu	Leu	Leu	Ser	Ser	Pro	Met
					180			185				190			
Leu	Val	Phe	Arg	Thr	Met	Lys	Glu	Tyr	Ser	Asp	Glu	Gly	His	Asn	Val
					195			200				205			
Thr	Ala	Cys	Val	Ile	Ser	Tyr	Pro	Ser	Leu	Ile	Trp	Glu	Val	Phe	Thr
					210			215			220				
Asn	Met	Leu	Leu	Asn	Val	Val	Gly	Phe	Leu	Leu	Pro	Leu	Ser	Val	Ile
					225			230			235				240
Thr	Phe	Cys	Thr	Met	Gln	Ile	Met	Gln	Val	Leu	Arg	Asn	Asn	Glu	Met
					245			250				255			
Gln	Lys	Phe	Lys	Glu	Ile	Gln	Thr	Glu	Arg	Arg	Ala	Thr	Val	Leu	Val
					260			265				270			
Leu	Val	Val	Leu	Leu	Leu	Phe	Ile	Ile	Cys	Trp	Leu	Pro	Phe	Gln	Ile
					275			280				285			
Ser	Thr	Phe	Leu	Asp	Thr	Leu	His	Arg	Leu	Gly	Ile	Leu	Ser	Ser	Cys
					290			295			300				
Gln	Asp	Glu	Arg	Ile	Ile	Asp	Val	Ile	Thr	Gln	Ile	Ala	Ser	Phe	Met
					305			310			315				320
Ala	Tyr	Ser	Asn	Ser	Cys	Leu	Asn	Pro	Leu	Val	Tyr	Val	Ile	Val	Gly
					325			330				335			

Lys	Arg	Phe	Arg	Lys	Ser	Trp	Glu	Val	Tyr	Gln	Gly	Val	Cys	Gln	
		340			345					350					
Lys	Gly	Gly	Cys	Arg	Ser	Glu	Pro	Ile	Gln	Met	Glu	Asn	Ser	Met	Gly
	355				360					365					
Thr	Leu	Arg	Thr	Ser	Ile	Ser	Val	Glu	Arg	Gln	Ile	His	Lys	Leu	Gln
	370			375						380					
Asp	Trp	Ala	Gly	Ser	Arg	Gln									
	385			390											

<210> 83
<211> 398
<212> PRT
<213> Homo sapiens

<400>	83														
Met	Asp	Ser	Ser	Ala	Gly	Pro	Gly	Asn	Ile	Ser	Asp	Cys	Ser	Asp	Pro
1				5				10						15	
Leu	Ala	Pro	Ala	Ser	Cys	Ser	Pro	Ala	Pro	Gly	Ser	Trp	Leu	Asn	Leu
	20							25					30		
Ser	His	Val	Asp	Gly	Asn	Gln	Ser	Asp	Pro	Cys	Gly	Pro	Asn	Arg	Thr
	35							40				45			
Gly	Leu	Gly	Gly	Ser	His	Ser	Leu	Cys	Pro	Gln	Thr	Gly	Ser	Pro	Ser
	50						55			60					
Met	Val	Thr	Ala	Ile	Thr	Ile	Met	Ala	Leu	Tyr	Ser	Ile	Val	Cys	Val
65					70				75				80		
Val	Gly	Leu	Phe	Gly	Asn	Phe	Leu	Val	Met	Tyr	Val	Ile	Val	Arg	Tyr
			85					90				95			
Thr	Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu	Ala	Leu
		100						105				110			
Ala	Asp	Ala	Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe	Gln	Ser	Val	Asn	Tyr
	115							120				125			
Leu	Met	Gly	Thr	Trp	Pro	Phe	Gly	Asn	Ile	Leu	Cys	Lys	Ile	Val	Ile
	130						135				140				
Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile	Phe	Thr	Leu	Cys	Thr
145					150				155				160		
Met	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Val	Cys	His	Pro	Val	Lys	Ala	Leu
		165						170				175			
Asp	Phe	Arg	Thr	Pro	Arg	Asn	Ala	Lys	Ile	Val	Asn	Val	Cys	Asn	Trp
		180						185				190			
Ile	Leu	Ser	Ser	Ala	Ile	Gly	Leu	Pro	Val	Met	Phe	Met	Ala	Thr	Thr
		195					200				205				
Lys	Tyr	Arg	Gln	Gly	Ser	Ile	Asp	Cys	Thr	Leu	Thr	Phe	Ser	His	Pro
	210					215				220					
Thr	Trp	Tyr	Trp	Glu	Asn	Leu	Leu	Lys	Ile	Cys	Val	Phe	Ile	Phe	Ala
225					230				235				240		
Phe	Ile	Met	Pro	Val	Leu	Ile	Ile	Thr	Val	Cys	Tyr	Gly	Leu	Met	Ile
			245					250				255			
Leu	Arg	Leu	Lys	Ser	Val	Arg	Met	Leu	Ser	Gly	Ser	Lys	Glu	Lys	Asp
			260				265				270				
Arg	Asn	Leu	Arg	Arg	Ile	Thr	Arg	Met	Val	Leu	Val	Val	Val	Ala	Val
			275				280				285				
Phe	Ile	Val	Cys	Trp	Thr	Pro	Ile	His	Ile	Tyr	Val	Ile	Ile	Lys	Ala
	290				295				300						
Leu	Ile	Thr	Ile	Pro	Glu	Thr	Thr	Phe	Gln	Thr	Val	Ser	Trp	His	Phe
305					310					315				320	
Cys	Ile	Ala	Leu	Gly	Tyr	Thr	Asn	Ser	Cys	Leu	Asn	Pro	Val	Leu	Tyr
				325					330				335		

Ala	Phe	Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Glu	Phe	Cys	Ile
							340		345						350
Pro	Thr	Ser	Ser	Thr	Ile	Glu	Gln	Gln	Asn	Ser	Ala	Arg	Ile	Arg	Gln
							355		360						365
Asn	Thr	Arg	Glu	His	Pro	Ser	Thr	Ala	Asn	Thr	Val	Asp	Arg	Thr	Asn
							370		375						380
His	Gln	Leu	Glu	Asn	Leu	Glu	Ala	Glu	Thr	Ala	Pro	Leu	Pro		
							385		390						395

<210> 84
<211> 405
<212> PRT
<213> Homo sapiens

<400>	84														
Met	Asp	Ser	Gly	Ala	Val	Pro	Thr	Asn	Ala	Ser	Asn	Cys	Ile	Asp	Pro
					5					10					15
Phe	Thr	His	Pro	Ser	Ser	Cys	Ser	Pro	Ala	Pro	Ser	Pro	Ser	Ser	Trp
					20					25					30
Val	Asn	Phe	Ser	His	Leu	Glu	Gly	Asn	Leu	Ser	Asp	Pro	Cys	Gly	Pro
					35					40					45
Asn	Arg	Thr	Glu	Leu	Gly	Gly	Ser	Asp	Arg	Leu	Cys	Pro	Ser	Ala	Gly
					50					55					60
Ser	Pro	Ser	Met	Ile	Thr	Ala	Met	Val	Thr	Ala	Ile	Ile	Ile	Met	Ala
					65					70					80
Leu	Tyr	Ser	Ile	Val	Cys	Val	Val	Gly	Leu	Phe	Gly	Asn	Phe	Leu	Val
					85					90					95
Met	Tyr	Val	Ile	Val	Arg	Tyr	Thr	Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile
					100					105					110
Tyr	Ile	Phe	Asn	Leu	Ala	Leu	Ala	Asp	Ala	Leu	Ala	Thr	Ser	Thr	Leu
					115					120					125
Pro	Phe	Gln	Ser	Val	Asn	Tyr	Leu	Met	Gly	Thr	Trp	Pro	Phe	Gly	Thr
					130					135					140
Ile	Leu	Cys	Lys	Ile	Val	Ile	Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr
					145					150					160
Ser	Ile	Phe	Thr	Leu	Cys	Thr	Met	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Val
					165					170					175
Cys	His	Pro	Val	Lys	Ala	Leu	Asp	Leu	Arg	Thr	Pro	Arg	Asn	Ala	Lys
					180					185					190
Ile	Ile	Asn	Ile	Cys	Asn	Trp	Ile	Leu	Ser	Ser	Ala	Ile	Gly	Leu	Pro
					195					200					205
Val	Met	Phe	Met	Ala	Thr	Thr	Lys	Tyr	Arg	Gln	Gly	Ser	Ile	Asp	Cys
					210					215					220
Thr	Leu	Thr	Phe	Ser	His	Pro	Thr	Trp	Tyr	Trp	Glu	Asn	Leu	Leu	Lys
					225					230					240
Ile	Cys	Val	Phe	Ile	Phe	Ala	Phe	Ile	Met	Pro	Ile	Leu	Ile	Ile	Thr
					245					250					255
Val	Cys	Tyr	Gly	Leu	Met	Ile	Leu	Arg	Leu	Lys	Ser	Val	Arg	Met	Leu
					260					265					270
Ser	Gly	Ser	Lys	Glu	Lys	Asp	Arg	Asn	Leu	Arg	Arg	Ile	Thr	Arg	Met
					275					280					285
Val	Leu	Val	Val	Ala	Val	Phe	Ile	Val	Cys	Trp	Thr	Pro	Ile	His	
					290					295					300
Ile	Tyr	Val	Ile	Ile	Lys	Ala	Leu	Ile	Thr	Ile	Pro	Glu	Thr	Thr	Phe
					305					310					320
Gln	Thr	Val	Ser	Trp	His	Phe	Cys	Ile	Ala	Leu	Gly	Tyr	Thr	Asn	Ser
					325					330					335

<210> 85
<211> 400
<212> PRT
<213> *Homo sapiens*

<400> 85
 Met Asp Ser Ser Ala Ala Pro Thr Asn Ala Ser Asn Cys Thr Asp Ala
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 Leu Ala Tyr Ser Ser Cys Ser Pro Ala Pro Ser Pro Gly Ser Trp Val
 20 25 30
 Asn Leu Ser His Leu Asp Gly Asn Leu Ser Asp Pro Cys Gly Pro Asn
 35 40 45
 Arg Thr Asp Leu Gly Gly Arg Asp Ser Leu Cys Pro Pro Thr Gly Ser
 50 55 60
 Pro Ser Met Ile Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val
 65 70 75 80
 Cys Val Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val
 85 90 95
 Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu
 100 105 110
 Ala Leu Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val
 115 120 125
 Asn Tyr Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile
 130 135 140
 Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu
 145 150 155 160
 Cys Thr Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys
 165 170 175
 Ala Leu Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Ile Asn Val Cys
 180 185 190
 Asn Trp Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala
 195 200 205
 Thr Thr Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser
 210 215 220
 His Pro Thr Trp Tyr Trp Glu Asn Leu Leu Lys Ile Cys Val Phe Ile
 225 230 235 240
 Phe Ala Phe Ile Met Pro Val Leu Ile Ile Thr Val Cys Tyr Gly Leu
 245 250 255
 Met Ile Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu
 260 265 270
 Lys Asp Arg Asn Leu Arg Arg Ile Thr Arg Met Val Leu Val Val Val
 275 280 285
 Ala Val Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile
 290 295 300
 Lys Ala Leu Val Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp
 305 310 315 320

His	Phe	Cys	Ile	Ala	Leu	Gly	Tyr	Thr	Asn	Ser	Cys	Leu	Asn	Pro	Val
							325		330						335
Leu	Tyr	Ala	Phe	Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Glu	Phe
							340		345						350
Cys	Ile	Pro	Thr	Ser	Ser	Asn	Ile	Glu	Gln	Gln	Asn	Ser	Thr	Arg	Ile
							355		360						365
Arg	Gln	Asn	Thr	Arg	Asp	His	Pro	Ser	Thr	Ala	Asn	Thr	Val	Asp	Arg
							370		375						380
Thr	Asn	His	Gln	Leu	Glu	Asn	Leu	Glu	Ala	Glu	Thr	Ala	Pro	Leu	Pro
							385		390						400

<210> 86
<211> 400
<212> PRT
<213> Homo sapiens

<400>	86														
Met	Asp	Ser	Ser	Ala	Asp	Pro	Arg	Asn	Ala	Ser	Asn	Cys	Thr	Asp	Pro
						1	5			10					15
Phe	Ser	Pro	Ser	Ser	Met	Cys	Ser	Pro	Val	Pro	Ser	Pro	Ser	Ser	Trp
						20			25						30
Val	Asn	Phe	Ser	His	Leu	Glu	Gly	Asn	Leu	Ser	Asp	Pro	Cys	Ile	Arg
						35		40			45				
Asn	Arg	Thr	Glu	Leu	Gly	Gly	Ser	Asp	Ser	Leu	Cys	Pro	Pro	Thr	Gly
						50		55			60				
Ser	Pro	Ser	Met	Val	Thr	Ala	Ile	Thr	Ile	Met	Ala	Leu	Tyr	Ser	Ile
						65		70		75					80
Val	Cys	Val	Val	Gly	Leu	Phe	Gly	Asn	Phe	Leu	Val	Met	Tyr	Val	Ile
						85		90			95				
Val	Arg	Tyr	Thr	Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn
						100		105			110				
Leu	Ala	Leu	Ala	Asp	Ala	Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe	Gln	Ser
						115		120			125				
Val	Asn	Tyr	Leu	Met	Gly	Thr	Trp	Pro	Phe	Gly	Thr	Ile	Leu	Cys	Lys
						130		135			140				
Ile	Val	Ile	Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile	Phe	Thr
						145		150		155					160
Leu	Cys	Thr	Met	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Val	Cys	His	Pro	Val
						165		170			175				
Lys	Ala	Leu	Asp	Phe	Arg	Thr	Pro	Arg	Asn	Ala	Lys	Ile	Ile	Asn	Val
						180		185			190				
Cys	Asn	Trp	Ile	Leu	Ser	Ser	Ala	Ile	Gly	Leu	Pro	Val	Met	Phe	Met
						195		200			205				
Ala	Thr	Thr	Lys	Tyr	Arg	Asn	Gly	Ser	Ile	Asp	Cys	Ala	Leu	Thr	Phe
						210		215			220				
Ser	His	Pro	Thr	Trp	Tyr	Trp	Glu	Asn	Leu	Leu	Lys	Ile	Cys	Val	Phe
						225		230			235				240
Ile	Phe	Ala	Phe	Ile	Met	Pro	Val	Leu	Ile	Ile	Thr	Val	Cys	Tyr	Gly
						245		250			255				
Leu	Met	Ile	Leu	Arg	Leu	Lys	Ser	Val	Arg	Met	Leu	Ser	Gly	Ser	Lys
						260		265			270				
Glu	Lys	Asp	Arg	Asn	Leu	Arg	Arg	Ile	Thr	Arg	Met	Val	Leu	Val	Val
						275		280			285				
Val	Ala	Val	Phe	Ile	Val	Cys	Trp	Thr	Pro	Ile	His	Ile	Tyr	Val	Ile
						290		295			300				
Ile	Lys	Ala	Leu	Ile	Thr	Ile	Pro	Glu	Thr	Thr	Phe	Gln	Thr	Val	Ser
						305		310			315				320

Trp	His	Phe	Cys	Ile	Ala	Leu	Gly	Tyr	Thr	Asn	Ser	Cys	Leu	Asn	Pro
				325					330					335	
Val	Tyr	Ala	Phe	Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Glu	Phe
				340					345					350	
Cys	Ile	Pro	Thr	Ser	Ser	Thr	Ile	Glu	Gln	Gln	Asn	Ser	Ala	Arg	Ile
				355				360				365			
Arg	Gln	Asn	Thr	Arg	Asp	His	Pro	Ser	Thr	Ala	Asn	Thr	Val	Asp	Arg
				370				375				380			
Thr	Asn	His	Gln	Leu	Glu	Asn	Leu	Glu	Ala	Glu	Thr	Ala	Pro	Leu	Pro
				385				390			395			400	

<210> 87
<211> 383
<212> PRT
<213> Homo sapiens

<400> 87															
Met	Glu	Thr	Ser	Gly	Asn	Ile	Ser	Asp	Phe	Leu	Tyr	Pro	Leu	Ser	Asn
1				5					10					15	
Pro	Val	Met	Ser	Asn	Ser	Ser	Val	Leu	Cys	Arg	Asn	Phe	Ser	Asn	Ser
				20					25					30	
Thr	Ser	Phe	Leu	Asn	Met	Asn	Gly	Ser	Ser	Arg	Asp	Ser	Thr	Asp	Glu
				35				40			45				
Gln	Asp	Lys	Thr	Pro	Val	Ile	Ile	Ala	Ile	Ile	Ile	Thr	Thr	Leu	Tyr
				50				55			60				
Ser	Ile	Val	Cys	Val	Val	Gly	Leu	Val	Gly	Asn	Val	Leu	Val	Met	Tyr
				65				70			75			80	
Val	Ile	Ile	Arg	Tyr	Thr	Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile
				85				90					95		
Phe	Asn	Leu	Ala	Leu	Ala	Asp	Ala	Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe
				100				105					110		
Gln	Ser	Val	Asn	Tyr	Leu	Met	Gly	Thr	Trp	Pro	Phe	Gly	Asp	Val	Val
				115				120				125			
Cys	Lys	Ile	Val	Met	Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile
				130				135			140				
Phe	Thr	Leu	Thr	Thr	Met	Ser	Ile	Asp	Arg	Tyr	Ile	Ala	Val	Cys	His
				145				150			155			160	
Pro	Val	Lys	Ala	Leu	Asp	Phe	Arg	Thr	Pro	Arg	Asn	Ala	Lys	Ile	Val
				165				170					175		
Asn	Val	Cys	Asn	Trp	Ile	Leu	Ser	Ser	Ala	Ile	Gly	Leu	Pro	Val	Met
				180				185				190			
Val	Met	Ala	Ser	Thr	Thr	Ile	Glu	Asn	Gln	Asn	Ser	Pro	Leu	Gln	Val
				195				200				205			
Ser	Asn	Phe	Asp	Cys	Thr	Leu	Leu	Phe	Pro	His	Pro	Pro	Trp	Tyr	Trp
				210				215			220				
Glu	Thr	Leu	Leu	Lys	Ile	Cys	Val	Phe	Ile	Leu	Ala	Phe	Ile	Met	Pro
				225				230			235			240	
Val	Leu	Ile	Ile	Thr	Val	Cys	Tyr	Gly	Leu	Met	Ile	Leu	Arg	Leu	Lys
				245				250				255			
Ser	Val	Arg	Met	Leu	Ser	Gly	Ser	Lys	Glu	Lys	Asp	Arg	Asn	Leu	Arg
				260				265				270			
Arg	Ile	Thr	Arg	Met	Val	Leu	Val	Val	Ala	Val	Phe	Ile	Ile	Cys	
				275				280				285			
Trp	Thr	Pro	Ile	His	Ile	Glu	Val	Ile	Ile	Lys	Ala	Leu	Val	Thr	Ile
				290				295			300				
Pro	Asn	Ser	Leu	Phe	Gln	Thr	Val	Thr	Trp	His	Phe	Cys	Ile	Ala	Leu
				305				310			315			320	

Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val Leu Tyr Ala Phe Leu Asp
325 330 335
Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe Cys Val Pro Ser Pro Ser
340 345 350
Val Leu Asp Leu Gln Asn Ser Thr Arg Asn Ser Asn Pro Gln Cys Glu
355 360 365
Gly Gln Ser Ser Gly His Lys Val Asp Arg Asn Asn Arg Gln Val
370 375 380